

2023/24

# Maths Hubs Professional and School Development Opportunities

Discover fully funded subject-specific opportunities to support professional learning for teachers and development for departments and schools.



**NCETM**  
NATIONAL CENTRE FOR EXCELLENCE  
IN THE TEACHING OF MATHEMATICS

# What opportunities does the Maths Hubs Network offer?



Again this academic year, the 40 Maths Hubs across England are offering a wide variety of professional development opportunities to individuals, departments and schools.

All of the projects involve teachers developing their knowledge and pedagogy for maths teaching, whilst collaborating with their peers and putting their new knowledge to work in their classrooms. Most also aim to influence classroom and collaborative practice that benefits maths teaching and learning across a department or school.

These professional development opportunities are coordinated by the NCETM (National Centre for Excellence in the Teaching of Mathematics) and the Maths Hubs Network, which consists of 40 hubs that cover the whole of England and serve all state-funded schools and colleges.

For 2023/24, there are over 30 different projects available. Generally, teachers will work alongside colleagues from other schools, in a small group led by a local experienced teacher with expertise in professional development and the school phase in question. A small number of projects involve larger groups, coordinated and led regionally or nationally. Meetings are a mix of online and face-to-face. The work takes place over an extended period, across two or three school terms, which allows for experimentation and experience-sharing within the group. Many projects include a parallel objective of embedding improved practice, leading to more secure learning across a department or school.

Participants will be involved in either **Work Groups, programmes or communities**, according to the experience offered to participant teachers (see page 3). However, all offer fully-funded, high-quality professional development, and the chance for participants to become more effective teachers of maths.





# Types of activity

<b>Work Group</b>	<p>Work Groups support schools to bring about school- or departmental-wide development in maths. Lead participant teachers from the schools collaborate locally with their peers to focus on this school-wide change, along with the associated practice development and professional learning. Work Groups are led by a teacher (or former teacher) expert, who is experienced in both maths education and in leading teacher professional development.</p>
<b>Programme</b>	<p>Programmes support individual teachers or leaders of maths in their professional development. There are two types: Specialist Knowledge for Teaching Mathematics (SKTM) programmes, where individuals develop specialist knowledge to improve their practice; and Local Leaders of Mathematics Education (LLME) development programmes, to equip practitioners to lead work with teachers and schools. Both involve participants joining a cohort of colleagues from other schools or colleges, and exploring centrally produced NCETM materials.</p>
<b>Community</b>	<p>Professional learning communities also emphasise supporting individual teachers or leaders of maths in their professional development. Participants collaborate formally and informally, over a sustained period of more than a year, to deepen their understanding of maths culture, curriculum, pedagogy, and professional development. Community Leads establish a professional learning culture that supports professional dialogue and mutual support, offering their own expert input where appropriate.</p>



## How can you get involved?

Discover the projects your local Maths Hub is offering – details of all the projects are in this catalogue. Then get in touch with your hub to book your place. Contact details for your hub are on the next page.

The Maths Hubs projects provide something for everyone and every school. Don't miss out!

# Welcome

Your local Maths Hub is:

## East Midlands East Maths Hub

The professional development we provide is fully funded, meaning it is **free** for the participant or the participant's school/college.

The Lead School for the hub is:

## The Minster School, Southwell, NG25 0LG

Some of the professional and school development activities in this catalogue take place in face-to-face meetings. Others happen online. In most cases you will be working together with colleagues from schools in your area.

To find out more about the Work Groups, programmes and communities on offer with your hub, check the details in the box on the bottom left corner of each page.

You can also contact us directly at the Maths Hub, or visit our website.

We look forward to hearing from you.

## Contact

w: [ememathshub.org](https://ememathshub.org)

e: [enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

tel: 01636 817377

t: @EMEMathsHub



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Fully funded

# Secondary Teaching for Mastery

## Development Work Groups

Professional development to enable you to introduce teaching for mastery across your maths department

### What is involved?

Secondary maths teachers whose schools want to introduce teaching for mastery can nominate two teachers ('Mastery Advocates') to join a Work Group. Mastery Advocates then form part of a locally-based group of teachers who meet regularly to develop professional knowledge and expertise, and receive bespoke support.

Teachers will collaborate with colleagues from local schools, and get support and guidance from a Secondary Mastery Specialist, to introduce and embed teaching for mastery in their department.

### Who can take part?

This programme is for state-funded secondary schools in England. Mastery Advocates should be teachers with the commitment, experience and authority to lead developmental work across a maths department. The support of the Head of Maths, and the headteacher or a member of SLT, is also essential.

In 2023/24, those teaching in special schools will have an enhanced offer that will enable them to network with other schools in a similar context.



### Find out more

Search **secondary teaching for mastery** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will begin to develop teaching for mastery approaches within your own classroom
- You and your head of department will begin to develop an understanding of the practices and principles aligned to teaching for mastery
- You will begin to support the teachers in your department to develop teaching for mastery approaches in their practice

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.





Fully funded

# Secondary Teaching for Mastery

## Sustaining Work Groups

A vibrant professional learning community to reflect upon and develop mastery approaches

### What is involved?

This project is for departments who have previously participated in Development Work Groups. While the Mastery Advocates from these departments will be significant members of the Work Group, the whole department is a member of this professional learning community.

Each Work Group will have a focus for the year. The four foci for 2023/24 are: developing mathematical thinking; developing coherence; developing mathematical coherence for learners across maths and science; and a bespoke teaching for mastery focus.

### Who can take part?

These Work Groups are for all departments that have previously participated in Mastery Development Work Groups and all Cohort 1-6 Mastery Specialist Departments. The two lead participants continue to be Advocates who have participated in a Development Work Group and key teachers from a Mastery Specialist's department, but particular Work Group sessions may sometimes be joined by participants' departmental colleagues.



### Find out more

Search **sustaining secondary mastery** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will continue to develop teaching for mastery approaches consistently across your department
- You and your department will collaborate to create a coherent curriculum in a culture of professional learning
- You will develop and implement a coherent and ambitious sustained development plan

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.





Fully funded

# Secondary Maths Subject Leaders Community

A CPD community designed specifically for secondary heads of maths

## What is involved?

This project provides an opportunity for participants to deepen their understanding of teaching approaches, of their wider roles, and of their capacity with their colleagues to transform secondary maths learning.

They will work collaboratively with other subject leaders, discuss developments and engage with research, and use this experience to inform their work in leading and developing maths education in school.

## Who can take part?

The project is for secondary heads of department/subject leaders, and is open to heads of department in schools already involved with Maths Hubs and to those who are not yet involved. In their first year of engagement with this project, participants will be part of a Work Group. In subsequent years they will be part of a Maths Hub-led subject leadership community.



### Find out more

Search **secondary maths subject leaders community** online or contact your local Maths Hub:  
[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- You will promote and develop a shared vision, culture and set of principles for teaching and learning in maths
- You will ensure coherence in the curriculum and provide support for teaching for mastery across the department
- You and your department will establish collaborative ways of working to support ongoing developments
- You will develop in your ability to lead change

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

# Secondary MAT Maths Leaders Community

A CPD community designed to support those leading maths across multiple schools

## What is involved?

Now in its third year, this project supports those who lead maths across multiple schools within a MAT. Participants will deepen their understanding of effective pedagogical approaches, of their wider leadership roles, and of their capacity with their colleagues to transform secondary maths teaching and learning.

New participants will complete a bespoke programme, and those continuing the project will develop their work together as a community. There will be opportunities for new and continuing participants to work together, so all can benefit from central provision and the opportunity for practice exchange with peers.

## Who can take part?

The project is for those who lead maths across multiple schools within a MAT, including at least one secondary school. This includes MAT maths leads who are continuing from previous years, and new participants. To better engage in the programme, participants are encouraged to have at least one school in a Secondary Teaching for Mastery Work Group in 2023/24, but this is not essential.



### Find out more

Search **secondary MAT maths leaders community** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- You will promote and develop a shared vision for effective teaching and learning in maths
- You will work with subject leaders across your MAT to lead and manage maths teaching effectively, and to develop teaching for mastery approaches within your own department
- You will understand the benefits of collaborative professional development for sustained development of professional knowledge and practice
- You will understand effective models of maths teacher professional development, the rationale for using them, and the evidence that supports them

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.







Fully funded

# Years 5-8 Continuity

## Work Groups

Strengthen the transition from primary to secondary school

### What is involved?

Work Groups in this project focus on curriculum and pedagogical continuity over Years 5 to 8. Participants will collaborate with colleagues from across KS2 and KS3, working on mathematical tasks together and reflecting on the resulting activity and learning.

Sessions will take place in KS2 and KS3 settings, offering the chance to see tasks in the context of a classroom. School-based activities between meetings encourage participants to make use of the resources with their own pupils.

### Who can take part?

The project is for those who teach and/or have responsibility for the curriculum in Years 5-8. Participants may be subject leaders or teachers with responsibility for transition in a school. They need to be supported to try out different tasks with their students and be released to attend three full-day workshops.



### Find out more

Search **years 5-8 continuity** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your pupils in KS2 and KS3 will demonstrate a positive attitude to maths
- You will make common use of approaches, representations and language across phases
- You will deepen your knowledge and understanding of the curriculum across KS2 and KS3 and the expectations of pupils at the end of each Key Stage
- You and your cross-phase colleagues will collaborate on issues of curriculum and pedagogy as a normal part of your schools' transition practice

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.



Fully funded

# Developing Core Maths Pedagogy

## Work Groups

Develop improved teaching approaches for Core Maths

### What is involved?

These Work Groups give teachers opportunities, through collaboration and experimentation, to develop improved teaching approaches that support the open-ended problem-solving skills Core Maths students need to develop, and to share these with departmental colleagues. Participants will design and trial classroom activities, sharing and reflecting on their experiences with others in the Work Group.

The project involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP).

### Who can take part?

Participants should be experienced teachers of Core Maths from schools and colleges in at least their second year of teaching Core Maths. Where appropriate, participants will be expected to work with colleagues in their own department.



### Find out more

Search **developing core maths pedagogy** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will gain raised awareness of the use of maths and statistics in everyday life
- You will teach mathematical concepts and processes effectively through contextualised problem-solving
- You will understand the philosophy of Core Maths
- You will support your school/college in developing clear ways of communicating and promoting its Core Maths offer

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools.





Fully funded

# Developing A Level Pedagogy Work Groups

Develop improved teaching approaches for A level Mathematics

## What is involved?

This project explores and deepens participants' pedagogic content knowledge, empowering teachers to enhance their classroom practice and to influence department-wide A level teaching. It is an engine for improving student understanding of A level Maths, and driving their subsequent success. Participants will design and trial classroom activities, sharing and reflecting on their experiences with others in the Work Group.

The project involves a direct working partnership between the Maths Hubs Network and the Advanced Mathematics Support Programme (AMSP).

## Who can take part?

Participants will be established teachers of A level Maths who are looking to deepen their pedagogical understanding. They must be teaching a current A level Maths group.

This Work Group would be particularly useful for those who may have already completed other A level subject knowledge and pedagogy CPD.

## Benefits

- Your students will have a deeper conceptual understanding of the A level Maths content
- You will understand the purpose of the Overarching Themes, including use of technology, and their impact on teaching and learning in A level Maths
- You and your department will have a better understanding of how ideas behind teaching for mastery can be used in the classroom
- You and your department will have a deeper understanding of content pedagogic knowledge for A level Maths

The **Work Groups** are fully funded by the Maths Hubs Programme and the AMSP, so are **free** to participating schools/colleges.



## Find out more

Search **developing A level pedagogy** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)



Fully funded

# Cross Phase – Supporting Low Attainers to Achieve a L2 Qualification in Mathematics

## Work Groups

### What is involved?

This is for teachers whose students will study up to Level 2 maths across secondary and post-16. Teachers of Years 10 and 11, and of GCSE Maths resit and/or Functional Skills Maths, will develop ways to support students who need to study maths beyond age 16 to achieve a L2 qualification.

Work Groups will focus on developing transferable teaching techniques aligned to teaching for mastery. Participants will attend three full-day workshops and complete practice-based tasks between sessions.

### Who can take part?

This is for teachers of GCSE Maths, and for those teaching GCSE Maths resit and/or Functional Skills Maths. Participants may be based in secondary schools, UTCs, FE colleges, Sixth Form colleges, schools with post-16 provision, or other post-16 settings.



### Find out more

Search **ncetm cross phase supporting low attainers** online or contact your local Maths Hub:  
[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will demonstrate a positive attitude to maths
- You will ensure that lesson design and pedagogy demonstrate a secure knowledge of curriculum continuity and sequencing
- You will understand the importance of consistency of language and representations relating to specific curriculum areas
- You and your colleagues will make collaboration a normal part of transition, supporting students continuing to work towards a L2 maths qualification

The **Work Groups** are fully funded by the Maths Hubs Programme, so are **free** to participating schools/ institutions.







Fully funded

# Specialist Knowledge for Teaching Mathematics (SKTM)

## Secondary Early Career Teachers

Develop mathematical subject knowledge and pedagogy

### What is involved?

Two maths-specific subject knowledge projects are available to support secondary Early Career Teachers (ECTs) – one is for ECTs who have not yet participated in this project, and one is for those who participated in 2022/23. Both projects offer high-quality subject knowledge and pedagogy maths support for ECTs, recognising the requirements of the ECF.

The programme will build on the knowledge gained during initial teacher training. This will be achieved by focusing on one area of maths in detail: multiplicative reasoning for participants in Phase 1, and sequences and graphical representations for participants in Phase 2.

### Who can take part?

Phase 1 is for those identified as Early Career Teachers – teachers in their first or second year of teaching. Phase 2 is for those in the early part of their careers. They will have engaged with Phase 1 before engaging with this phase.



### Find out more

Search **SKTM secondary early career teachers** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will reason with increasing confidence in response to effective questioning within the classroom
- You will consider task and lesson design, with your students' needs in mind
- You will notice aspects of teaching for mastery within a given task or lesson, and be able to articulate their purpose

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

# Specialist Knowledge for Teaching Mathematics (SKTM)

Secondary Non-specialist Teachers

Highly-regarded professional development offering secondary non-specialist maths teachers valuable CPD focusing on subject knowledge and pedagogy

There are significant numbers of people teaching maths in secondary schools without specialist initial teacher training. This programme supports non-specialist teachers in developing the specialist knowledge (the blend of subject knowledge and pedagogical knowledge) for teaching maths.

It is designed to take place over the equivalent of six days.

## Who can take part?

This programme is provided for non-specialist teachers of maths in state-funded schools who fit the following definition: A non-specialist teacher of mathematics is 'a teacher that is currently teaching some mathematics or has commitment from a headteacher/executive head to teach some mathematics within the next year, who has not undertaken initial teacher training (ITT) in mathematics'



### Find out more

Search **SKTM secondary non-specialist maths teachers** online or contact your local Maths Hub:  
[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

The SKTM Programme offers participants:

- Your students will develop a deep, secure and connected understanding of the maths they are learning
- You will increase your confidence in planning for progression in maths
- You will improve your subject and curriculum knowledge of secondary maths

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.







**Fully funded**

# Specialist Knowledge for Teaching Mathematics (SKTM)

## Secondary Teaching Assistants

Develop mathematical subject knowledge and pedagogy

### What is involved?

This programme is designed to improve the subject knowledge and pedagogical knowledge of all TAs supporting the learning of secondary maths.

Participants will focus on using precise mathematical language, representations, and reasoning within the topics: addition and subtraction; multiplication and division; ratio; and fractions. They will also carry out follow-up tasks in school to enable practice transfer to the classroom. The programme will take place over the equivalent of four days; participants must attend all sessions.

### Who can take part?

This is for teaching assistants who work predominantly with students in the KS3 maths classroom or who lead intervention sessions with groups of students. Participants' schools should already be engaged with a Teaching for Mastery Work Group, and this programme will complement this provision.



### Find out more

Search **SKTM secondary teaching assistants** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will demonstrate a positive attitude towards the learning of maths
- You will use appropriate mathematical language and representations with confidence
- You will develop your understanding of how to adapt resources to meet students' needs
- You will develop an understanding of how algebra relates to the generalisation of number

The **programme** is fully funded by the Maths Hubs Programme, so is **free** to participating schools.



Fully funded

# Specialist Knowledge for Teaching Mathematics (SKTM)

Core Maths Teachers

Support for teachers new to teaching this qualification

## What is involved?

This programme supports teachers in developing specialist knowledge for teaching Core Maths and increases their confidence in teaching the course. The programme forms part of the overall Advanced Mathematics Support Programme (AMSP) and Maths Hubs Core Maths professional development offer.

The principal focus is on Core Maths subject knowledge and pedagogy, and the programme will be based on six key themes: using contextualised problem-solving; applying Fermi estimation and modelling; developing critical analysis; making sense of finance; using the pre-release materials; exploring statistics.

## Who can take part?

This programme is for teachers who are in their first two years of teaching Core Maths and are teaching a Core Maths class during the academic year 2023/24.



### Find out more

Search **SKTM core maths** online or contact your local Maths Hub:

[enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- Your students will gain raised awareness of the use of maths and statistics in everyday life
- You will plan lessons/sequences of lessons to promote student understanding, confidence, and progress
- You will understand the philosophy of Core Maths, with its approach to maths through contextualised problem-solving
- You will understand how online learning and technology can be used to support Core Maths teaching

The **programme** is fully funded by the Maths Hubs Programme and the AMSP, so is **free** to participating schools.







Fully funded

# Strengthening Partnerships with ITT Providers

A professional learning community for ITT providers and Maths Hub leadership

## What is involved?

This project aims to form an established group of ITT representatives across the sector who are committed to developing communities of practice in order to review and evolve their provision.

Any work undertaken will be in conjunction with the leaders of maths provision in ITT institutions, to strengthen the partnership and agree actions that will support the deepening of understanding of teaching for mastery for ITT trainees at an award level. Activity may include working across hub boundaries and collaborating in larger regions.

## Who can take part?

Participants will be from the ITT community; they should be directly involved in ITT with a responsibility for maths. They will represent the various ITT providers across the hub region so may include HEI, SCITT and School Direct, and represent different phases of ITT including EYTS, QTS (primary and secondary), and post-16.



### Find out more

Search **strengthening partnerships with ITT providers** online or contact your local Maths Hub: [enquiries@ememathshub.org](mailto:enquiries@ememathshub.org)

## Benefits

- You and those responsible for maths provision at your institution will review your practice and programme
- You will aim to ensure trainees have some understanding of designing lessons informed by mastery principles
- Maths Hubs leaders will have a dynamic awareness of the local ITT provision and its school-based partnerships
- Maths Hubs leaders will create opportunity for collaboration and discussion across ITT providers, and use it to inform hub work

The **community** is fully funded by the Maths Hubs Programme, so is **free** to participating institutions.

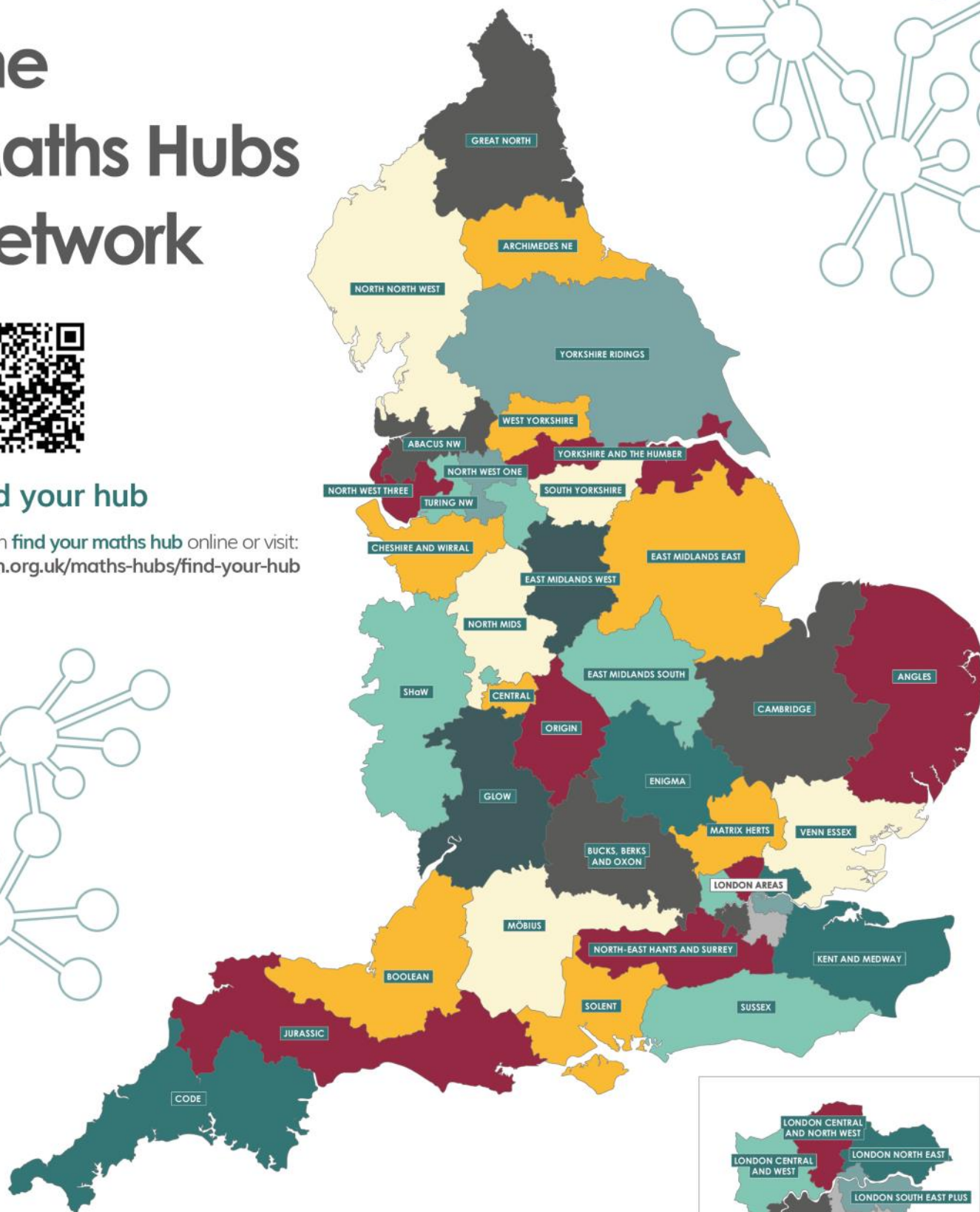


# The Maths Hubs Network



## Find your hub

Search **find your maths hub** online or visit:  
[ncetm.org.uk/maths-hubs/find-your-hub](https://ncetm.org.uk/maths-hubs/find-your-hub)



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